

# PATENT ABSTRACTS OF JAPAN

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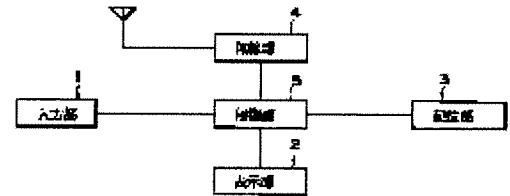
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## (54) PORTABLE TELEPHONE SET WITH MESSAGE NOTIFYING FUNCTION

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To provide a portable telephone set with a message notifying function that informs a speech opposite party of a message during a speech, without interrupting the conversation.

**SOLUTION:** This portable telephone set is provided with an entry section 1, that enters a message consisting of character data and instructs the transmission of this message during a speech, a display section 2 that displays the message, a storage section 3 that stores the message, a radio section 4 that transmits a message to a speech opposite party as additional information when receiving transmission instruction of the message from the entry section, and the control section 5 that controls the operation of the entry section, the display section, the storage section and the radio section.



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## CLAIMS

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### [Claim(s)]

[Claim 1]A portable telephone with a message notification function characterized by comprising the following.

An input part which a message of alphabetic data is inputted and directs transmission of this message during a telephone call.

An indicator which displays said message.

A storage parts store which stores said message.

A wireless section which will transmit to a call partner by making the message concerned into additional information if transmission of said message is directed from said input part, and a control section which controls operation of said input part, said indicator, said storage parts store, and said wireless section.

[Claim 2]A portable telephone with a message notification function, wherein said input part chooses a message which transmits among two or more messages memorized by said storage parts store in the portable telephone with a message notification function according to claim 1.

[Claim 3]A portable telephone with a message notification function, wherein said wireless section receives a message from said call partner and said indicator displays a message which received in the portable telephone with a message notification function according to claim 1 or 2.

[Claim 4]A portable telephone with a message notification function, wherein said storage parts store memorizes a message which received in the portable telephone with a message notification function according to claim 3.

[Claim 5]A portable telephone with a message notification function by which an additional information identifier, a call number / supplementary service identifier, and a message identifier being included in any one claim of claim 1 - claim 4 as said additional information in a portable telephone with a message notification function of a statement.

[Claim 6]In the portable telephone with a message notification function according to claim 5, as said additional information, A portable telephone with a message notification function containing a reason display, a display, key pad facility, a signal, feature activation, or a feature indication.

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## DETAILED DESCRIPTION

### [Detailed Description of the Invention]

#### [0001]

[Field of the Invention]Especially this invention relates to the portable telephone with a message notification function which can transmit the message of alphabetic data during a telephone call about a portable telephone.

#### [0002]

[Description of the Prior Art]While a portable telephone spreads in recent years, the pager and short mail with which the message of alphabetic data is transmitted are spreading. Two-way communication with a sound is performed in a portable telephone. For this reason, there is an advantage that the check between transmit information is easy in a portable telephone, in real time. On the other hand, there is a fault of being easy to generate mishearing, in transfer with a sound. On the other hand, in the message transmission by alphabetic data, there is an advantage that there are few possibilities that misunderstanding of a message content may arise. However, message transmission is one-way communication. For this reason, there is a fault that it is difficult to perform the check of message reception and the check between message contents in real time.

[0003]Then, the portable telephone which has a function which notifies a call partner of a message is proposed. An example of such a portable telephone with a message notification function is indicated by literature 1: "JP,9-65996,A." The message storing means which stores the message created beforehand according to the art of an indication in this literature 1, The displaying means which displays a message etc., and the message selected designation means for directing transmission of a desired message, It has the means which carries out the conversion process of the message content specified as alphabetic data by the conversion process means and the message selected designation means in the message content specified by the message selected designation means to voice data. And this portable telephone has a function which transmits the selected message as alphabetic data, voice data or a character, and voice data instead of a voice sound.

#### [0004]

[Problem(s) to be Solved by the Invention]However, in the portable telephone of a statement, a message is transmitted to the 1st above-mentioned literature instead of a voice sound. That is, a sound and a message were not able to be sent simultaneously. For this reason, in order to transmit a message, there was a problem that it was necessary to once interrupt conversation.

[0005]This invention is made that the above-mentioned problem should be solved, and it aims at offer of the portable telephone with a message notification function which can notify a call partner of a message, without interrupting conversation during a telephone call.

#### [0006]

[Means for Solving the Problem]In order to aim at achievement of this purpose, an artificer concerning this application thought out for a message to be notified, without interrupting conversation during a telephone call, when using an indicative data in additional information, as a result of repeating various examination and experiments.

[0007]Then, according to the portable telephone with a message notification function of this invention, input a message of alphabetic data, and. An input part which directs transmission of this message during a telephone call, and an indicator which displays that message, It has composition provided with a storage parts store which stores the message, a wireless section which will transmit to a call partner by making the message concerned into additional information if transmission of a message is directed from an input part, and a control section which controls operation of an input part, an indicator, a storage parts store, and a wireless section.

[0008]Thus, according to this invention, a message is transmitted as additional information. For this reason, a call partner can be notified of a message, without interrupting conversation during a telephone call.

[0009]A control section displays on an indicator a message inputted from an input part in control of each part, and it stores it in a storage parts store if needed. If transmission of a message is directed from an input part, a control section will read a specified message from a storage parts store, and will transmit it to a wireless section. And a control section makes a message transmit as additional information from a wireless section.

[0010]As for an input part, in a portable telephone with a message notification function of this invention, it is desirable preferably to choose a message which transmits among two or more messages memorized by storage parts store. If constituted in this way, from inside of two or more messages registered beforehand, a desired message can be chosen and it can transmit.

[0011]In a portable telephone with a message notification function of this invention, preferably, a wireless section receives a message from a call partner, and, as for an indicator, it is desirable to display a message which received. If constituted in this way, a message transmitted by the other party during a telephone call can be received, and it can be displayed on an indicator.

[0012]As for a storage parts store, in a portable telephone with a message notification function of this invention, it is desirable preferably to memorize a message which received. If constituted in this way, a message which received is memorizable to a storage parts store if needed.

[0013]In a portable telephone with a message notification function of this invention, it is desirable preferably as additional information to include an additional information identifier, a call number / supplementary service identifier, and a message identifier.

[0014]In a portable telephone with a message notification function of this invention, it is still more desirable preferably as additional information to include a reason display, a display, key pad facility, a signal, feature activation, or a feature indication.

[0015]

[Embodiment of the Invention]Hereafter, this embodiment of the invention is described with reference to drawings. The drawing to refer to has only shown roughly the size, shape, and arrangement

relationship of each constituent to such an extent that it can understand this invention. Therefore, this invention is not limited only to the example of a graphic display.

[0016]First, with reference to drawing 1, the composition of the portable telephone with a message notification function of this embodiment is explained. Drawing 1 is a functional block diagram for explaining the composition of a portable telephone with a message notification function. As shown in drawing 1, this portable telephone is provided with the input part 1, the indicator 2, the storage parts store 3, the wireless section 4, and the control section 5. This input part 1 is easily realizable by giving a character input function to the dial button of a portable telephone, for example. And this input part 1 inputs the message of alphabetic data, and it is provided with the function to direct transmission of this message, during the telephone call. In this embodiment, the input part 1 has a function which chooses the message which transmits among two or more messages memorized by the storage parts store 3.

[0017]The indicator 2 is easily realizable with the liquid crystal display panel currently used also for the conventional portable telephone, for example. And the indicator 2 displays the message which transmits. For example, when registering a message, the message inputted by the input part 1 is displayed. For example, when two or more messages are registered into the storage parts store 3, a message with the selected input part 1 is displayed. In this embodiment, the indicator 2 also displays the message which the indicator received during the telephone call.

[0018]Also in the conventional portable telephone, the storage parts store 3 is easily realizable by RAM currently used by built-in or wearing, for example. And the message which transmits is stored. In this embodiment, the storage parts store 3 also memorizes the message which received if needed.

[0019]The transmission section of the conventional portable telephone can be used for the wireless section 4. And the wireless section 4 will transmit a message to a call partner, if message transmission is directed by the input part 1 during the telephone call with a sound. Transmission of a message is performed as additional information. For this reason, a call partner can be notified of a message, without interrupting conversation during a telephone call for this reason. In this embodiment, the message from a call partner also receives the wireless section 4.

[0020]The control section 5 controls operation of each part. That is, the control section 5 displays on the indicator 2 the message inputted from the input part 1, and it stores it in the storage parts store 3. If transmission of a message is directed from the input part 1, the control section 5 will read the specified message from the storage parts store 3, and will transmit it to the wireless section 4. And the control section 5 makes a message transmit as additional information from the wireless section 4. The control section 5 will display the message which received on the indicator 2, if a message is received from a call partner, and it is stored in the storage parts store 3 if needed.

[0021]Thus, since a message is transmitted as additional information according to this portable telephone, a message can be transmitted, without interrupting a telephone call. for this reason, it can boil in real time that the other party received the message by the telephone call of a voice sound, and it can be checked. Consensual validation can be carried out in real time by telephone call also with the contents of the transmitted message. As a result, for example, when the contents of the message

are wrong, it is possible to recognize a mistake promptly by telephone call, and the message of the contents of the right can be broadcast again by retransmission of message. Therefore, improvement in the certainty of signal transduction and quick nature can be aimed at.

[0022]Here, an additional information format is shown in the following table 1 as an example of additional information. In Table 1, the information element of additional information and its information are indispensable, or the classification of an option and the information length of the information are shown as a lot.

[0023]

[Table 1]

付加情報フォーマット

情報要素	種別	情報長
付加情報識別子	必須	1
呼番号／付加サービス識別子	必須	1
メッセージ種別	必須	1
理由表示	オプション	2～5
表示	オプション	2～34
キーパッドファシリティ	オプション	2～35
シグナル	オプション	2
フィーチャアクティベーション	オプション	2～4
フィーチャインディケーション	オプション	2～5

[0024]As shown in the above-mentioned table 1, in this format, an "additional information identifier", "a call number / supplementary service identifier", and three information elements of "message classification" are made into mandatory information. And as for the information length of these three information elements, all are "1."

[0025]In the above-mentioned table 1, six information elements other than mandatory information are made into the option. That is, the information element of the 1st option is reason display [ for ], and the information length is 2-5. The information element of the 2nd option is a "display" and the information length is "2-34." The information element of the 3rd option is "key pad facility", and the information length is "2-35." The information element of the 4th option is a "signal" and the information length is "2." The information element of the 5th option is "feature activation", and the information length is "2-4." The information element of the 6th option is a "feature indication", and the information length is "2-5."

[0026]Next, with reference to drawing 2, the register operation of the message before message transmission is explained. Drawing 2 is a flow chart for explaining message register operation. In advance of message transmission, the message of a transmitting schedule is first inputted by the input part 1 in registration of a message (S1 of drawing 2). As contents of the message, you make it wait each other and the telephone number of a place, waiting time or a sending person, or a third party is mentioned, for example. The message inputted by the input part 1 is displayed on the indicator 2 (S2 of drawing 2).

[0027]And if the message displayed on the indicator 2 is checked and there is no change, registration

will be directed by the input part 1 (S3 of drawing 2). The message in which registration was directed is memorized by the storage parts store 3. When there is change, display information is changed by the input part 1 (it is S5 to drawing 2). And it returns to S1 and a desired message is inputted. In inputting two or more messages, it repeats the above-mentioned operation.

[0028]Next, with reference to drawing 3, the operation in the case of message transmission is explained. Drawing 3 is a flow chart for explaining the operation at the time of message transmission. The message which transmits is first specified by the input part 1 in transmission of a message (S6 of drawing 3). In specifying the message of the characteristic out of two or more messages, it may be made to choose the message which it may be made to specify the number of a message, or makes display a message one by one for example, and is displayed.

[0029]Next, the control section 5 reads the specified message from the storage parts store 3 (S7 of drawing 3). Next, the control section 5 displays the read message on the indicator 2 (S8 of drawing 3).

[0030]Next, the user who checked the displayed message directs transmission or Make Changes of a message by the input part 1 (S9 of drawing 3). That is, in changing the contents of the message, it inputs the message after change by operation of the input part 1 (S10 of drawing 3). And it returns to operation of S8. In transmitting the displayed message, the control section 5 checks that a portable telephone is talking over the telephone (S11 of drawing 3). When it is under telephone call as a result of a check, the wireless section 4 is made to transmit a message to the call partner point as additional information. In not being under telephone call, the control section 5 displays that transmission is impossible on the indicator 2. And when transmitted, as shown in the key map of drawing 4, a message is transmitted to the message reception person 14 through the communications network 12 from the message transmission person 10.

[0031]In the embodiment mentioned above, although the example which constituted this invention from specific conditions was explained, this invention can make various change. For example, in the embodiment mentioned above, although the example which transmits while talking the message registered beforehand over the telephone was explained, by this invention, the message inputted from the input part may be transmitted directly, for example.

[0032]

[Effect of the Invention]As mentioned above, since a message is transmitted as additional information according to the portable telephone with a message notification function of this invention according to the portable telephone as explained in detail, a message can be transmitted, without interrupting a telephone call.

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[Translation done.]

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## DESCRIPTION OF DRAWINGS

### [Brief Description of the Drawings]

[Drawing 1] It is a functional block diagram for explaining the composition of the portable telephone with a message notification function of an embodiment.

[Drawing 2] It is a flow chart for explaining operation of message registration of the portable telephone with a message notification function of an embodiment.

[Drawing 3] It is a flow chart for explaining operation of the message transmission of the portable telephone with a message notification function of an embodiment.

[Drawing 4] It is a key map for explaining message transmission.

### [Description of Notations]

1 Input part

2 Indicator

3 Storage parts store

4 Wireless section

5 Control section

10 Message transmission person

12 Communications network

14 Message reception person

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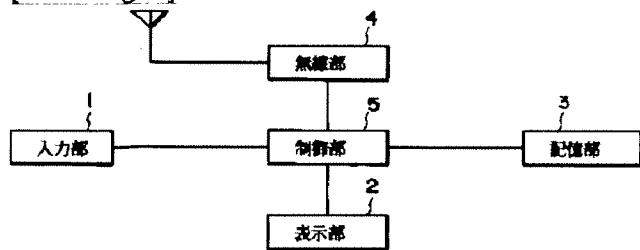
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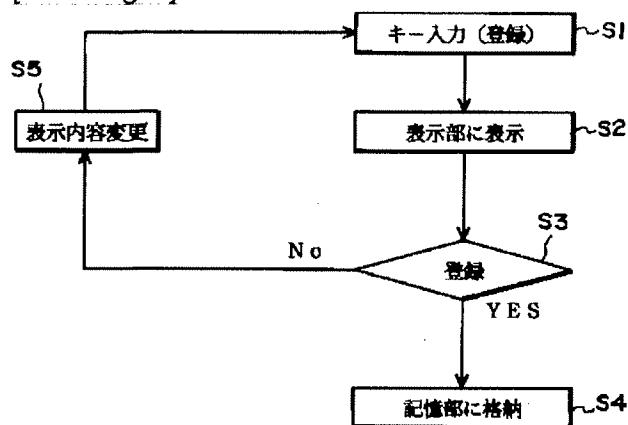
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## DRAWINGS

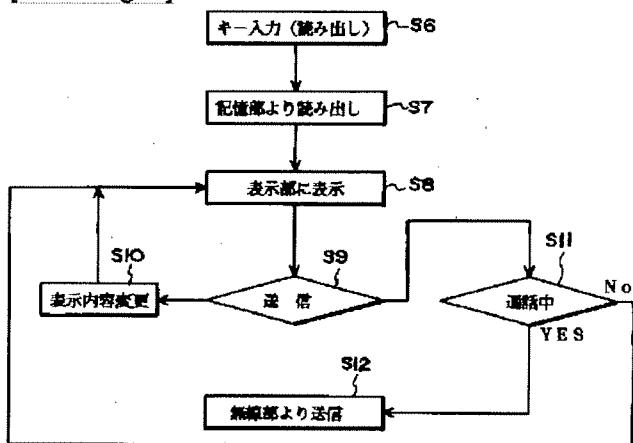
## [Drawing 1]



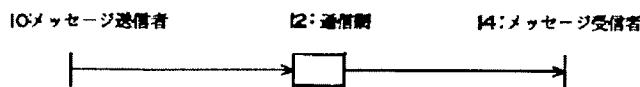
## [Drawing 2]



## [Drawing 3]



## [Drawing 4]



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**WRITTEN AMENDMENT**

[Written amendment]

[Filing date]August 20, Heisei 11 (1999.8.20)

[Amendment 1]

[Document to be Amended]Specification

[Item(s) to be Amended]Claim 1

[Method of Amendment]Change

[Proposed Amendment]

[Claim 1]An input part which a message of alphabetic data is inputted and directs transmission of this message during a telephone call,

An indicator which displays said message,

A storage parts store which stores said message,

A wireless section which will transmit to a call partner by making the message concerned into additional information simultaneously with audio transmission if transmission of said message is directed from said input part,

A portable telephone with a message notification function which is provided with a control section which controls operation of said input part, said indicator, said storage parts store, and said wireless section, and is characterized by things.

[The amendment 2]

[Document to be Amended]Specification

[Item(s) to be Amended]0005

[Method of Amendment]Change

[Proposed Amendment]

[0005]This invention is made that the above-mentioned problem should be solved, and it aims at offer of the portable telephone with a message notification function which can notify a call partner of a message simultaneously with a sound, without interrupting conversation during a telephone call.

[Amendment 3]

[Document to be Amended]Specification

[Item(s) to be Amended]0007

[Method of Amendment]Change

[Proposed Amendment]

[0007]Then, according to the portable telephone with a message notification function of this invention, input the message of alphabetic data, and. The input part which directs transmission of this message during a telephone call, and the indicator which displays that message, It has composition provided with the storage parts store which stores the message, the wireless section which will transmit to a call partner by making the message concerned into additional information simultaneously with audio transmission if transmission of a message is directed from an input part, and the control section which controls operation of an input part, an indicator, a storage parts store, and a wireless section.

[Amendment 4]

[Document to be Amended]Specification

[Item(s) to be Amended]0019

[Method of Amendment]Change

[Proposed Amendment]

[0019]The transmission section of the conventional portable telephone can be used for the wireless section 4. And the wireless section 4 will transmit a message to a call partner, if message transmission is directed by the input part 1 during the telephone call with a sound. Transmission of a message is performed as additional information. For this reason, a call partner can be notified of the message of alphabetic data simultaneously with a sound, without interrupting conversation during a telephone call. In this embodiment, the message from a call partner also receives the wireless section 4.

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[Translation done.]